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10/051,993	01/17/2002	Lewis Illingworth	120-103	9170

7590 08/01/2003  
Ward & Olivo  
Suite 300  
382 Springfield Avenue  
Summit, NJ 07901

EXAMINER

PRINCE, FRED G

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 08/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/051,993

Applicant(s)

ILLINGWORTH, LEWIS

Examiner

Fred Prince

Art Unit

1724

-- Th MAILING DATE of this communication appears on th cover sheet with the correspond nc addr ss --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 6, 10-21, 25, 27, 30 and 31 is/are rejected.
- 7) ☐ Claim(s) 2-4, 7-9, 22-24, 26, 28, 29 and 32-34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Priority*

An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification of in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)). Applicant must supply the serial number and filing date of each of the prior applications. The specific reference to any prior nonprovisional application must include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.

### *Drawings*

1. Figures 10-12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

2. The disclosure is objected to because of the following informalities: Throughout the specification, reference is made to earlier applications by title only. Applicant is

required to reference the earlier applications by the serial number, or, if the applications have become patents, by patent number.

Appropriate correction is required.

### ***Claim Objections***

3. Claim 5 is objected to because of the following informalities: --nozzle-- should be inserted after "vortex". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 6 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 6 recites the limitation "the annular duct" in line 2. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 14 recites the limitation "said centrifugal separation means" in line 3. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 6, 10-15, 17, 20-21, and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Petrenko (Abstract of SU 1664372).

Petrenko teaches a fluid cleaner comprising fluid delivery means (abstract), a toroidal vortex nozzle (5, 6) centrifugally separating matter from a fluid via centrifugal separating means (3), a centrifugal pump in the form of a propeller/impeller (4), a collector (3), a vent (7) in an annular duct, and recirculating fluid (Figure) through a toroidal vortex nozzle (5, 6) to attract matter with a flowing fluid.

The recitation of a low-pressure region being created by the vortex is a process limitation which, in an apparatus claim, is not given patentable weight as the limitation fails to provide additional structure to the claimed invention.

Per claims 14 and 20, the recitation of a pressure difference is a process limitation which, in an apparatus claim, is not given patentable weight as the limitation fails to provide additional structure to the claimed invention.

10. Claims 1, 6, 13-17, 20-21, and 30-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Beer et al.

Beer et al. teach a fluid cleaner comprising fluid delivery means (Figure ), a toroidal vortex nozzle centrifugally separating matter from a fluid (col. 3, lines 41-50), a removable collector (46), and recirculating fluid (col. 5, lines 1-10).

The recitation of a low-pressure region being created by the vortex is a process limitation which, in an apparatus claim, is not given patentable weight as the limitation fails to provide additional structure to the claimed invention.

Per claims 14 and 20, the recitation of a pressure difference is a process limitation which, in an apparatus claim, is not given patentable weight as the limitation fails to provide additional structure to the claimed invention.

11. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Lerner.

Lerner teaches a fluid cleaner comprising fluid delivery means, a toroidal vortex nozzle (12, 18) which may have a rectangular configuration (col. 7, lines 34-38).

The recitation of a low-pressure region being created by the vortex is a process limitation which, in an apparatus claim, is not given patentable weight as the limitation fails to provide additional structure to the claimed invention.

12. Claims 25 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Sama.

Sama teaches a method of cleaning submerged surfaces including the steps of attracting matter with a flowing fluid (abstract), centrifugally separating and loosening matter (col. 3, lines 49-63), and recirculating fluid (col. 1, lines 42-48).

### ***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petrenko in view of De Bernardo.

Petrenko is described above. Petrenko does not disclose a plug.

De Bernardo discloses a removable plug (17) in order to remove accumulated matter from the separator.

It would have been obvious for the skilled artisan to have provided the apparatus of Petrenko with a plug in order to remove accumulated matter from the separator, as suggested by De Bernardo.

15. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petrenko in view of Christianson.

Petrenko is described above. Petrenko does not disclose a door on the collector.

Christianson discloses a door (86) on the collector in order to clean out accumulated matter.

It would have been obvious for the skilled artisan to have provided a door on the collector of Petrenko in order to clean out accumulated matter, as suggested by Christianson.

#### ***Allowable Subject Matter***

16. Claims 2-9, 16, 18-19, 22-24, 26, 28-29, and 32-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in

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independent form including all of the limitations of the base claim and any intervening claims.

Per claims 2-4, 8-9, 24, 28-29, 32-33, while claim 1, 25, and 31 are not patentable for the reasons provided above, and it known to provide wheels in order to facilitate movement of a cleaner and a brush to loosen debris, in the examiner's opinion, the prior art fails to teach or fairly suggest modifying the cleaner of Petrenko or Sama such that the respective inventions include the elements recited in the respective dependent claims. The instant invention provides the advantage of efficient, low-energy cleaning while being portable and removing solids attached to a surface.

Per claims 7 and 22, while claim 1 is not patentable for the reasons provided above, in the examiner's opinion, the prior art fails to teach or fairly suggest the apparatus of claim 1 further including a water-tight or sealed housing. The instant invention provides the advantage of preventing debris from being released to the environment.

Per claims 23 and 34, while claim 1 and 31 are not patentable for the reasons provided above, the prior art fails to teach or fairly suggest the cleaner in a pool. The instant invention provides the advantage of efficient, low-energy cleaning of a pool and the water in the pool.

Per claim 30, while claim 25 is not patentable for the reasons provided above, in the examiner's opinion, the prior art fails to teach or fairly suggest a toroidal nozzle being used in combination with the method of cleaning submerged surfaces recited in



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claim 25. The instant invention provides the advantage of efficient, low-energy cleaning of a submerged surface.

***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References are cited of interest to show the state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Prince whose telephone number is (703) 306-9169. The examiner can normally be reached on Monday-Thursday, 6:30-4:00; alt. Fridays 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine R. Copenheaver can be reached on (703) 308-1261. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

  
**FRED G. PRINCE**  
**PRIMARY EXAMINER**

July 22, 2003